

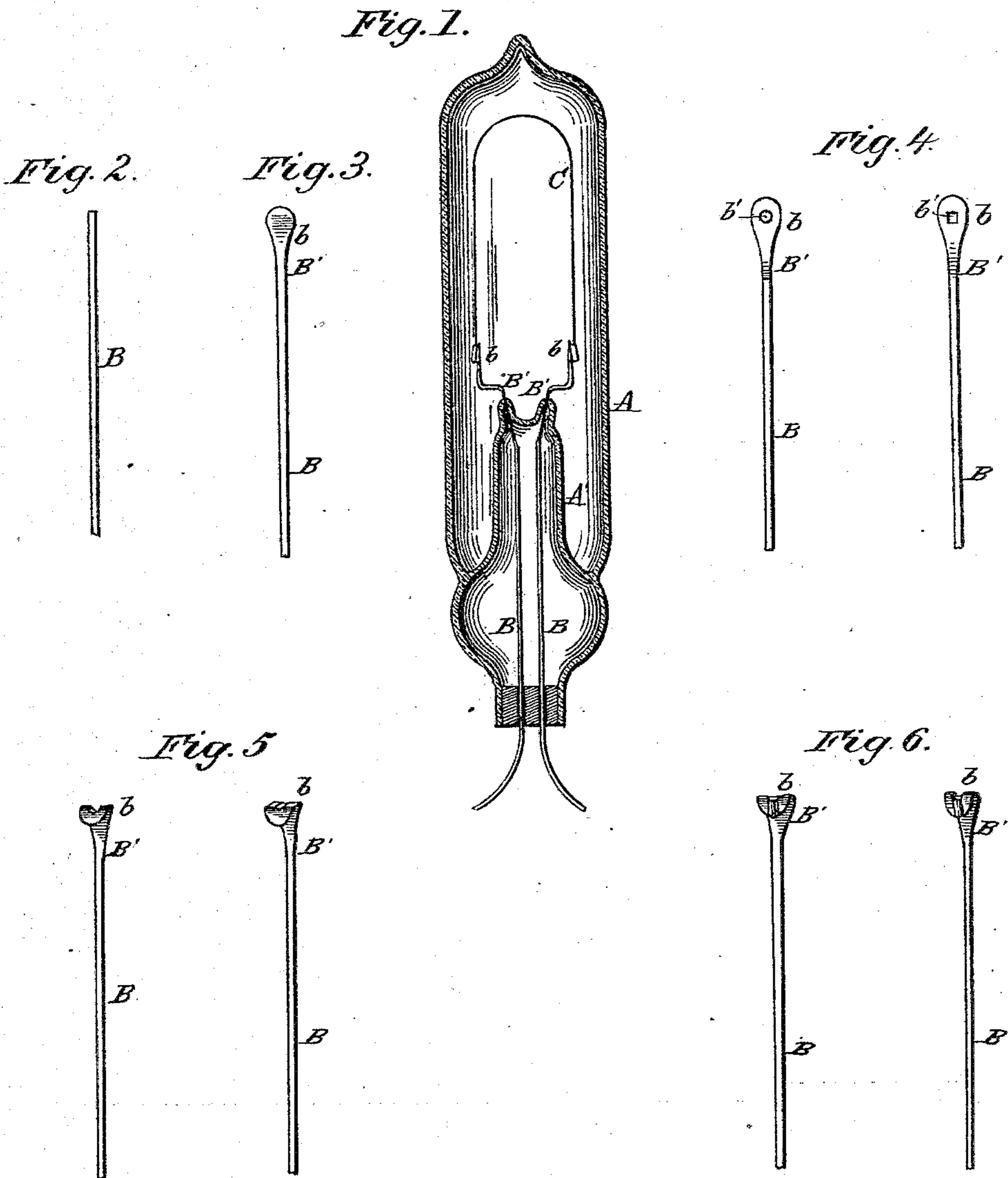
(No Model.)

A. WELSH.

HOLDER FOR THE CARBONS OF INCANDESCING ELECTRIC LAMPS.

No. 295,087.

Patented Mar. 11, 1884.



WITNESSES:

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*pr*  
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# UNITED STATES PATENT OFFICE.

ALEXANDER WELSH, OF ST. DENIS, MARYLAND, ASSIGNOR TO THE VIADUCT MANUFACTURING COMPANY OF BALTIMORE CITY.

HOLDER FOR THE CARBONS OF INCANDESCING ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 295,087, dated March 11, 1884.

Application filed July 28, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER WELSH, residing at St. Denis, Baltimore county, Maryland, have invented certain new and useful Improvements in Clamps for the Carbons of Incandescing Electric Lamps, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof, in which—

- 10 Figure 1 is a section taken centrally through a lamp containing my improvement. Fig. 2 is a view of the blank from which the holder is made. Fig. 3 is a view of the blank after the first operation, with the end flattened. 15 Fig. 4 is a view of the same after the second operation, a hole having been made in the flat portion. Fig. 5 is a view after the third operation, the flat end being bent over; and Fig. 6 shows the completed blank.

- 20 Like letters refer to the same parts in all the figures.

The object of my invention is to furnish a clamp for the carbon filaments of incandescing electric lamps; and it consists in the construction and arrangement hereinafter fully 25 described, and then specifically claimed.

Referring to the drawings, A is the body of the lamp, which is first formed as a tube, the lower end being open, and a constricted tube 30 leading from the upper end. A' is the base of the lamp, which is first formed separate from the body A. The wires B are put through the upper end of the base, the portion in contact with and sealed in the glass being of platinum and the upper end and lower portions 35 of copper. The platinum being in the quality of expansiveness when heated about the same as glass, it is sealed in the teats *a* in any desired manner.

- 40 The carbon-holder is formed of the copper wire, which projects into the lamp, and may be described as follows, viz: A blank such as shown in Fig. 2 is flattened from B' to the outer end, as shown at *b* in Fig. 3. This end

then is perforated, the hole being round or 45 square, as desired, as shown in Fig. 4. The end is now bent over, the fold being on a line with the hole, as seen in Fig. 5, when a wire is passed into the hole, and the blank pressed close together, after which the wire is removed, leaving the blank as shown in Fig. 6. The ends 50 of the filament of carbon are inserted into the tube or opening left in the blank, as above described, and the joint is completed in any desired manner, as by coating with an electro-deposit of metal. The platinum wire having 55 been sealed in the base A', the holders, (two in number,) with the carbon attached, are secured to the portion projecting by fusing the copper on the platinum, and the base complete is 60 placed in the body of the lamp and sealed in the position shown in Fig. 1. The lamp is now exhausted through the constricted tube before mentioned, and said tube sealed, forming the complete lamp shown. The wires pass 65 out of the lamp through a cork or other elastic non-conducting stopper.

This holder is simple, cheap, effective, and not liable to get out of order.

Having thus described my invention, what 70 I claim, and desire to secure by Letters Patent, is—

The holder herein described for carbon filaments, consisting of a piece of wire having its end flattened, the flat portion pierced with a 75 hole corresponding to the shape of the filament, bent over on the line of said hole, and pressed on a form of the shape in section of the filament, thus forming a tube to receive the carbon, substantially as and for the purpose set forth. 80

Witness my signature in presence of two witnesses.

ALEXANDER WELSH.

Witnesses:

S. BRASHEARS,  
GEO. H. PISTEL.